REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1-13 are pending in this application. Of these claims, claims 1 and 13 are independent, and the remaining claims, directly or indirectly, depend from claim 1.

Claim Amendments

By way of this reply, claims 1 and 13 have been amended to clarify the claimed invention. Specifically, the term "files" has been clarified as "files of fixed length, and wherein each of said files of fixed length is associated with address information in the recording media and the scheduling information for scheduling said recording operation." Further, the features of "recovery means" and "step of recovery" recited in claims 1 and 13, respectively, have been clarified, in part, as "to terminate (or terminating) a process of recording data into the retrieved file as a file of fixed length so as to be readable and writable." Claims 3, 8, and 12 have been amended to remove redundancies with base claim 1, as amended. Further, claims 1-4, 8, and 9 have amended to replace the term "include" with "comprise." No new matter has been added by these amendments. Support for the amendments may be found, for example, in Figures 3A-3C and paragraphs [0045]-[0047] of the published application.

Rejection(s) under 35 U.S.C. § 102

Claims 1, 2, and 13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,017,078 ("Frimout"). As discussed above, by way of this reply, independent claims 1 and 13 have been amended to clarify the claimed invention. To the extent that this rejection may still apply to independent claim 1 and 13, as amended, the rejection is respectfully traversed for the reasons set forth below.

As discussed in the previous response, independent claim 1 requires that the recovery means retrieves a file having been recorded at the interruption of the power supply from the files.

For a scheduled data recording operation to a file, in which an end sign is recorded at the end of the operation, the file becomes incapable of being read or write if the recording operation is interrupted while recording to the file because the end sign is missing. This may occur, for example, due to a power failure. Accordingly, such a function of the recovery means, as required by the claimed invention, enables the file missing an end sign to be readable and writable state by executing a closing process of the file.

However, on page 3, paragraph 3 in the final Office Action, the Examiner states, the system shown by Frimount the capable of completing recording processes of the 1) a video cell C1 to Cn (GOPs), 2) a chapter or 3) the video or title set, which is temporarily stopped in an incomplete state of the processes, and such capability can be equated to the feature of the recovery means for "retrieving a file having been recorded at the interruption of the power supply from said files and closes the retrieved file to make the file readable and writable," as required by the claimed invention.

As discussed above, by way of this reply, independent claim 1 has been amended, and requires further limitations, that is, features of (1) the *"files of fixed length, wherein each of the*

files of fixed length is associated with address information in the recording media and the scheduling information for scheduling said recording operation," and (2) the "recovery means *to terminate a process of recording data into the retrieved file as a file of fixed length* so as to be readable and writable."

In one or more embodiments of the claimed invention, the address space of the digital hard disk of HDD 27 includes areas E1, E2, E3 and E4. Area E1 records user information UF, area E2 records image recording information RFj (j=1, 2, 3, . . . m) corresponding to each program to be recorded, area E3 records time-shift data TSD that is image data for a time-shift image recording mode, and area E4 records image recording data RCD for a normal image recording mode that is not the time-shift image recording mode.

Image recording information RFj includes program name information RFA indicating the name of a corresponding program, and scheduling information RFB indicating scheduling contents for a scheduled image recording of the program, and at least one file information Fi (i=1, 2, 3, . . . , n). In HDD 27, the image data of the program is recorded in files of fixed length. Corresponding to a file recording image data, file information Fi is formed every time the file is created. The file information Fi includes a used address area UAD indicating an address area in area E3 or E4 recording a corresponding file, and an end sign ES. The end sign ES is information to be written when recording of image data for the corresponding file ends, or when recording of image data of the program of the corresponding file is completed. Accordingly, whether recording of the image data for the file corresponding to file information Fi normally ends and the file is closed (a program routine for recording image data into the file is terminated) or not can be identified depending on whether end sign ES is recorded or not.

Image recording information RFj of area E2 of HDD 27 is information for administering and recording to which space in area E3 or E4 the corresponding program file is arranged.

When accessing (reading and writing) image data of area E3 or E4, image recording information RFj of area E2 is referred to, and the access is made based on the reference result. Accordingly, even when image data (image recording data RCD or time-shift data TSD) is not defective and in a perfect state, if the contents of image recording information RFj is corrupted or incomplete, the image data (image recording data RCD or time-shift data TSD) recorded in area E3 or E4 can not be deleted or read, resulting in a wasted memory area in HDD 27 which can not be used (*See*, for example, paragraphs [0047]-[0048] of the published application).

To solve such a problem, in one or more embodiments of the claimed invention, a sub-CPU 10 refers to file information identifier UFC of user information UF of HDD 27, and specifies file information Fi corresponding to the file being written with an image data through an image recording operation immediately prior to the interruption of the previous power supply, and detects used address area information UAD for the corresponding image data file and writes it together with end sign ES to the specified file information Fi. Thus, the corresponding image data file is recovered to a state so as to be read or written. Therefore, even when the power supply is unexpectedly interrupted, the sub-CPU 10 specify the file of fixed length, which is in a data recording process and closes the file (terminates the program routine for recording image data into the file) so as to be readable and writable. As the result, all of the image recording files can become playback (*See*, for example, paragraph [0071] of the published application).

Accordingly, independent claim 1, as amended, requires the above features of the "*files of fixed length, wherein each of the files of fixed length is associated with the scheduling information for scheduling said recording operation,*" and the "recovery means *to terminate a process of recording data in the retrieved file as a file of fixed length* so as to be readable and writable."

Due to the above features of the claimed invention, even when the recording information including the scheduling information of the information storing portion is not retained due to the interruption of the power supply, at the start of a power supply to the control unit that follows, the same scheduling information in the recording medium that is retained regardless of the power failure is read and recorded in the information storing portion (*See,* paragraph [0018] of the published application).

In contrast, Frimount fails to teach, or suggest, not only files of fixed length associated with address information in the recording media, but also any data structure associated with such "*scheduling information* for scheduling recording operation," as required by amended claim 1. This is evidenced by that, as the Examiner acknowledges, Frimount fails to teach or suggest any control logic related to scheduling information for a recording operation. Accordingly, Frimount necessarily fails to show or suggest at least the feature of the "files of fixed length associated with scheduling information, which is retrieved and manipulated to be readable and writable after recorded at the interruption of the power supply," required by independent claim 1, as amended.

In view of the above, Frimount fails to show or suggest all of the limitations of amended independent claim 1. Accordingly, claim 1 is patentable over Frimount. By virtue of their dependence, claims 2-12 are patentable for at least the same reasons as claim 1. Further, amended independent claim 13 requires, in part, "a recovering step of *terminating a recording data into the retrieved file as a file of fixed length so as to be readable and writable,* if the interruption of the power supply is detected in said power interruption detecting step," "*files of fixed length,*" and "*wherein each of said files of fixed length is associated with address information in the recording media and the scheduling information for scheduling said recording operation.*" These limitations are similar to the limitations of amended claim 1

discussed above. Therefore, amended independent claim 13 is patentable over Frimount at least the same reasons as set forth above. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C § 103

Claims 3-12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Frimount in view of U.S. Patent No. 7,116,889 ("Kweon"). As discussed above, claim 1 is patentable over Frimount. Kweon does not provide that which Frimount lacks with respect to claim 1. Thus, claim 1 is patentable over Kweon. By virtue of their dependence, claims 3-12 are patentable for at least the same reasons as claim 1. Accordingly, withdrawal of the rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 04536/024001).

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Respectfully submitted,

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